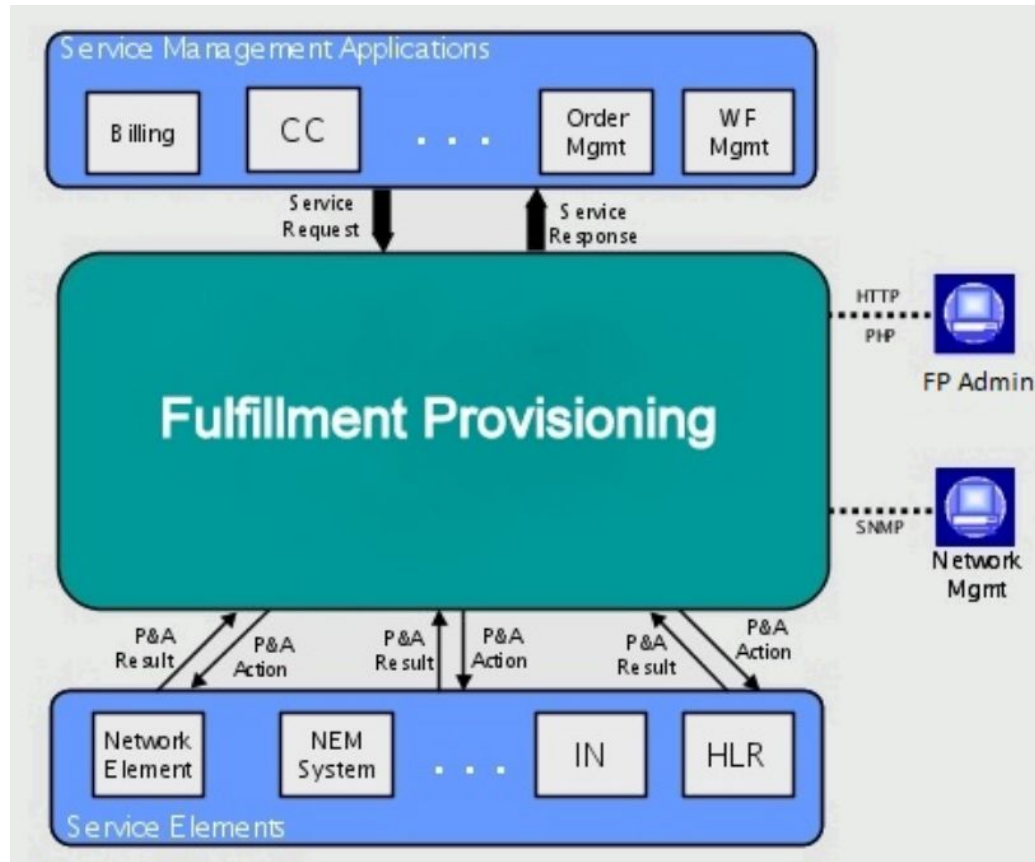




# Architecture & Concepts of FP

Nagamalleswararao Settineni

- Service activation and provisioning solution
- Provisioning of convergent networks
  - fixed and wireless, voice and data
- An interface between service management applications and service elements



- Service Management Application
  - Define and drive the creation of new service at operational level
  - Can be a Billing, Customer Care systems
  - Service Operations
    - Creation
    - Activation
    - Modification
    - Suspension
    - Suspension
    - Deactivation
    - Interrogation
    - Deletion

- Northbound systems send requests in external format
  - Such as csv, xml, data base
- FP translates them into to internal Service Order format.

- Service Elements

- Consists of different network elements and network element managers
- Provision and activate the services at network level

- HLR
- PSTN Switches
- Intelligent Network platforms
- Voice Mail Systems
- E-mail Systems
- WAP gateways
- Routers
- Data element managers
- Authenticate Servers
- DSL equipment
- UMTS Network

## *Service Order* is fulfilled

- Receives the SO from NB applications and parses it into an optimized internal format
- validation, data enrichment and divided into sequence of tasks
- Tasks are translated into *cartridge* commands and send for the execution
- Once fulfilled, response is composed and sent back result to NB
- Rolls back partial work to an acceptable state if any errors

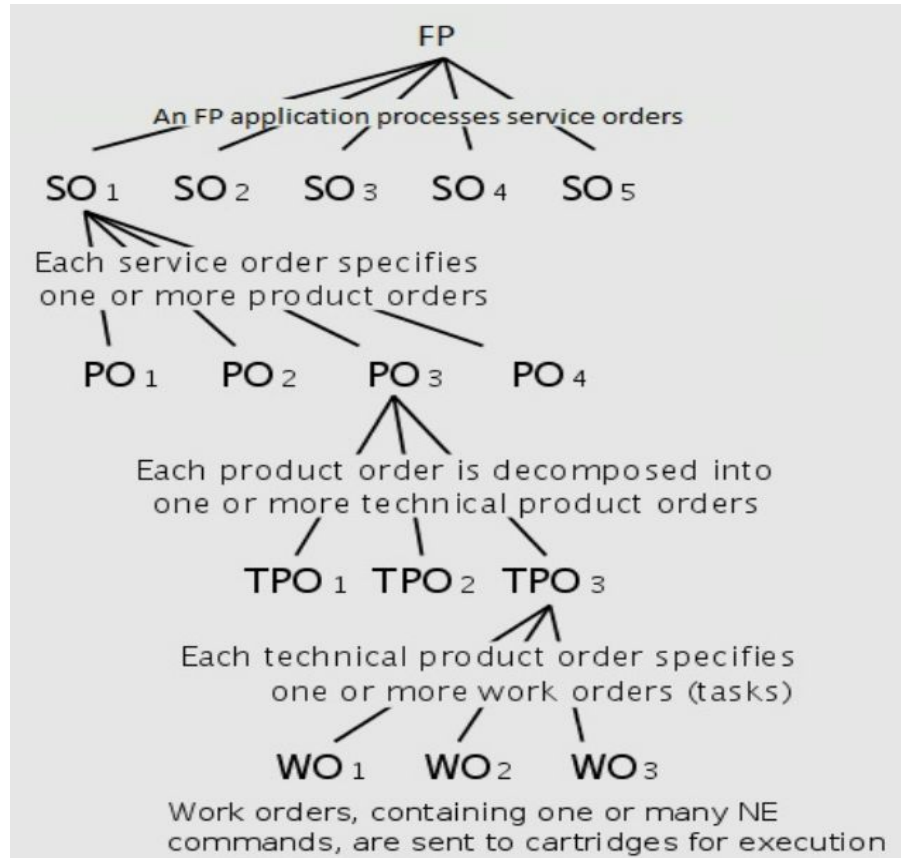
- Processes can be administered via web-based user interface
- Includes
  - Operational Control
  - System Configuration
  - Alarm Management
  - Log access
  - System upgrades



- Effective connectivity to service applications and network elements
- Extensive configurability that minimizes the need for custom development
- Rapid development when customization is required
- Optimized response time and throughput based on a multi-threaded optimized implementation.

- Linear scaling across processors
- Graphical specifications for provisioning and activation processes.
- Extendable Web-enabled GUI

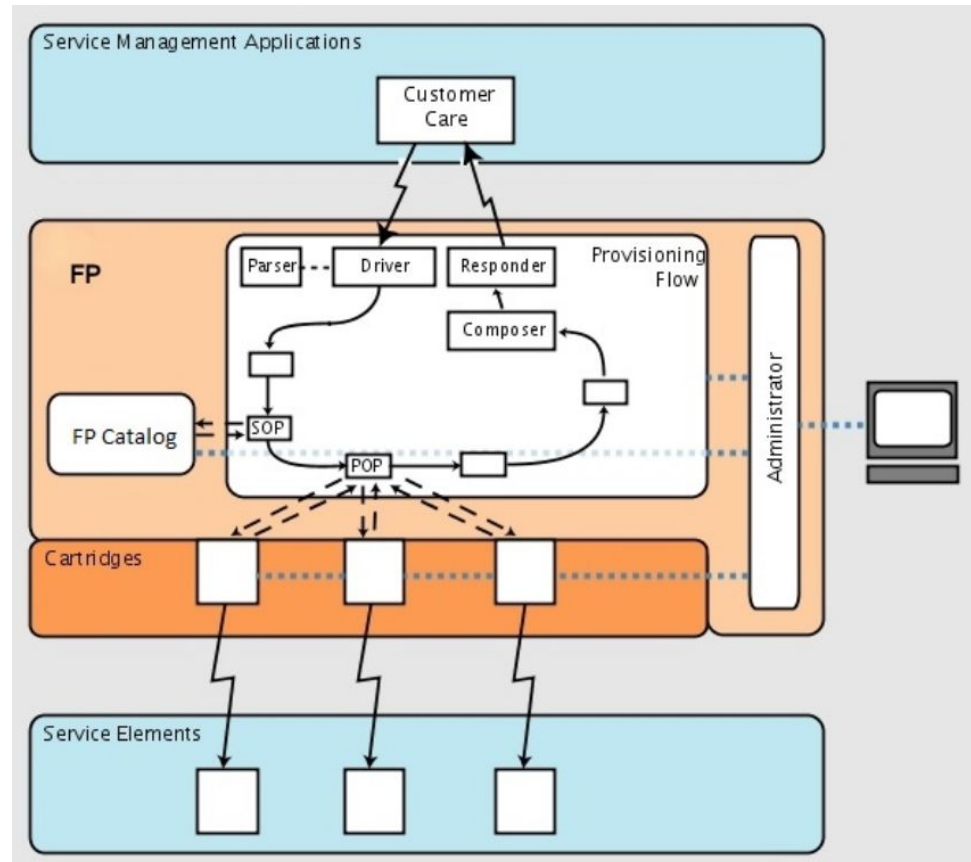
- External requests are called Service Orders(so)
- An SO consists of one or more products orders(po)
- PO is decomposed into Technical Product Orders(tpo)
- Each TPO into a sequence of Work Orders (wo)
- A WO is smallest unit of work



- Provisioning flow
- Catalog
- Administrator
- Cartridges

Service Order Processing(SOP)

Product Order Processing(SOP)



- Streams application
- Consists of standard Streams modules
  - Reservoirs
  - flow controllers
  - terminators
- Special Streams modules
  - Drivers
  - Composers
  - Responders
  - Service Order Processing
  - Product Order Processing
  - Check point handling
  - Other pre-build & custom modules

- SOP module invokes Catalog
- Decomposes Product Orders into Technical Product Orders
- Consists of rules
- Produces
  - Tasks with fully populated information

- Provides administrative access
  - Provisioning elements,
  - Cartridges
- Accessible from Web Browser
- Access based on the security definitions



- Interfaces between FP and NE
- Framework
  - Manage connections with network elements, session layers
    - Voice mails, Intelligent Network
- Translates WO task into concrete messages
- Execute them to respective NE

- Create a provisioning flow
- Create product flows
- Set up catalog, data mappings, and routing
- Install and configure cartridges
- Start using “provadmin” commands
  - install, start, stop, monitor